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PROGNOSTIC IMPLICATION OF CREATININE CLEARANCE AND HEMOGLOBIN COMPOSITE INDEX IN PATIENTS WITH ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION

i2 Poster Contributions
McCormick Place South, Hall A
Saturday, March 24, 2012, 9:30 a.m.-Noon

Session Title: Acute Myocardial Infarction
Abstract Category: 6. PCI - Acute MI
Presentation Number: 2520-60

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Background: Creatinine clearance (CCr) and Hemoglobin (Hb) is readily-available laboratory test that can predict clinical outcomes in patients with acute MI. The aim of study was to evaluate impact of CCr and Hb composite index (CHI) on long-term clinical outcomes in patients with STEMI undergoing primary PCI with DES.

Methods: We analyzed consecutive 326 STEMI patients treated with primary PCI within 12 hours of onset of symptom. Cox regression analysis determined optimal combination of CCr and Hb into CHI. The discriminative ability of CHI, CCr and Hb in predicting 12-month MACE, composite of all cause of death, nonfatal MI and ischemic stroke were compared using area under receiving operating curve.

Results: The optimal weighting of CCR and Hb to form CHI to predict 12-month MACE was Hb + CCr/12. The area under the curve for CHI was significantly greater (0.857) than for Hb (0.777, p=0.003) and CCr (0.802, p=0.039). A positive trend between MACE and CHI quintiles was observed; 39.4%, 9.4%, 6.1%, 0.0%, 1.5% of MACE occurred from Q1 to Q5 (p <0.001). In a multivariable setting, patients with Q1 (vs. Q5) showed the highest 12-month MACE risk (HR: 26.77, 95% CI 2.86-250.66, p=0.004) after adjusting for standard risk factors. MACE-free survival rate was significantly lower in patients with Q1 compared to patients with other quintiles (p <0.001)

Conclusions: The CHI is a useful and powerful marker to predict 12-month MACE in patients with STEMI who underwent primary PCI, with a superior discriminative ability than CCr or Hb.